

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 06-160482

(43)Date of publication of application : 07.06.1994

(51)Int.Cl. G01R 31/28  
G06F 11/22

(21)Application number : 04-312329

(71)Applicant : NEC CORP

(22)Date of filing : 20.11.1992

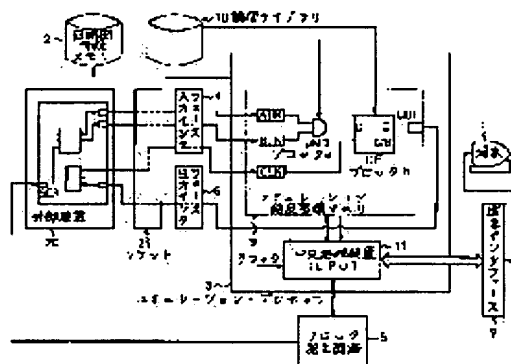
(72)Inventor : KOJIMA SAWAKO

## (54) HARDWARE-EMULATOR

## (57)Abstract:

**PURPOSE:** To execute the evaluation of an apparatus by realizing a pseudo- hardware function of part of an LSI, etc., supplementing an incomplete hardware function, and monitoring an operating state of an internal signal on a terminal.

**CONSTITUTION:** The hardware emulator comprises input/output interfaces 4 and 6 with an external device 20, a circuit diagram information memory 2 for storing circuit diagram information, an emulation processor 3 for realizing a pseudo-hardware operation according to an input signal and the circuit diagram information, a clock generator 5 for generating a clock to be supplied to the device 20, and a terminal interface 7 having an interface function between an emulation result storage memory 9 for storing an emulation result and a terminal 1. Thus, since the hardware function in an apparatus is emulated according to the circuit diagram information in the memory and a monitor of an internal state can be realized at a terminal, a malfunction of the circuit can be analyzed while operating the apparatus.



## LEGAL STATUS

[Date of request for examination] 20.11.1992

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number] 2570558

[Date of registration] 24.10.1996

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

24.10.2002

Copyright (C); 1998,2003 Japan Patent Office

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/004527

A. CLASSIFICATION OF SUBJECT MATTER  
Int.Cl<sup>7</sup> G01R31/3183

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
Int.Cl<sup>7</sup> G01R31/28-31/3193, G06F11/22

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2004  
Kokai Jitsuyo Shinan Koho 1971-2004 Toroku Jitsuyo Shinan Koho 1994-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 6-160482 A (NEC Corp.), 07 June, 1994 (07.06.94), Full text; all drawings (Family: none)	1-17

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search  
01 July, 2004 (01.07.04)

Date of mailing of the international search report  
20 July, 2004 (20.07.04)

Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.